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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,752

05/31/2006

Hans Peter Feuerbaum

ZIMR/0028

1505

26290 7590 11/24/2008  
PATTERSON & SHERIDAN, I.L.P.  
3040 POST OAK BOULEVARD  
SUITE 1500  
HOUSTON, TX 77056

EXAMINER

NGUYEN, KIET TUAN

ART UNIT

PAPER NUMBER

2881

MAIL DATE

DELIVERY MODE

11/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/564,752

**Applicant(s)**

FEUERBAUM ET AL.

**Examiner**

Kiet T. Nguyen

**Art Unit**

2881

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 10, 12-14, 16, 17 and 19-23 is/are rejected.
- 7) ☒ Claim(s) 4, 7-9, 11, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date 1/13/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

***Rejection Under 35 U.S.C. 112, Second Paragraph***

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites the limitation "the at least one pole piece" in line 4. There is insufficient antecedent basis for this limitation in the claim.

***Rejection Under 35 U.S.C. 102(b)***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-6, 10, 12-14, 16-17 and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakoshi et al. (6,476,390).

Murakoshi et al. (6,476,390) discloses, in figs. 1-17, an apparatus for inspecting a sample. The apparatus includes an emitter array 1 for emitting a plurality of electron beams; an electrode unit 2 for extracting and accelerating the electron beams and for providing a vacuum isolation (see fig. 4); lenses 3 and 4 for focusing and imaging the electron beams on the sample 10; a controller 28 including a plurality of controlling parts for independently controlling potential differences between a first potential of the emitter array 1 for emitting the electron beams, a second potential of the electrode unit 2 for accelerating the electron beams and a third potential of the sample 10 for decelerating the electron beams on the sample 10 from 10 kV to 500 eV (see col. 8, lines 58-59)

thereby the accelerated energy of the primary electron beams is at least 5 higher than the decelerated energy by applying a negative voltage to the sample 10; mini-columns 51, 52, 53 having a space of at least 10 mm from the emitter array 1 to a sample stage 11; a further electrode unit 442 applied by a voltage +9.5 kV (see col. 12, lines 17-18) for increasing the electron beam energy with respect to the energy corresponding to the third potential by at least a factor of 5; a deflector 6 for deflecting the electron beams; and the pressure of  $10^{-7}$  Pa (see col. 10, lines 12-14) in a first vacuum of a first region containing the emitter array 1 being at least a factor of 10 lower than the pressure of  $10^{-5}$  Pa (see col. 2, lines 4-9) in a second vacuum of a second region containing the sample.

Claims 4, 7-9, 11 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Parker et al. (6,617,587) discloses a multi-beam electron beam lithography tool; and

2) Nakasuji et al. (7,049,585) discloses an electron beam apparatus using a plurality of electron beams.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet T. Nguyen whose telephone number is 571-272-2479. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kiet T. Nguyen/  
Primary Examiner, Art Unit 2881